

# LIFE AFTER...

*REGAINING YOUR BALANCE, SURVIVING  
THE RESET, AND (RE)BUILDING A  
GOVERNMENT THAT WORKS*



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## PREFACE: THERE IS NO EASY BUTTON FOR WHAT AILS THE PUBLIC SQUARE

*“History is full of cases in which complicated and frightening problems were often solved by cheap and simple fixes.”*

- Steven D. Levitt  
Economist, University of Chicago  
Co-Author, *Freakonomics* (2005) and  
*Super Freakonomics* (2009)

At a time when state and local government is confronting myriad complicated and frightening problems, public officials would be excused for not counting on history to repeat itself. Recent experience has taught them that cheap and simple fixes, if they exist at all, are in short supply.

They would also be excused for taking a head’s down orientation to deal with the urgent matters that clutter their desk, email inbox and smart phone. Lurching from crisis to crisis is sometimes necessary but, in the long push, not sufficient for stewards of the public trust. Thinking about the future and looking to the horizon is the responsibility of those who lead. That’s where this white paper comes in. As the name suggests, it is, quite simply, intended to be a catalyst for your thinking about “Life after...”. With an eyes-wide-open approach, it is meant to begin a vital conversation about “Life after ...” the recession, the stimulus, the retirement bow wave, the election and the next big thing that will hit your community.

“Life after looks a lot more collaborative than it does today,” says Aneesh Chopra, national chief technology officer and assistant to the president, about a future that

is ushering in new models of collaboration and leadership. “On the president’s first full day in office, he issued his open government declaration<sup>1</sup> and called on our government to be more focused on how it can be more transparent, more participatory and more collaborative.”

*“LIFE AFTER LOOKS A LOT MORE COLLABORATIVE THAN IT DOES TODAY.”*

- ANEESH CHOPRA, NATIONAL CHIEF TECHNOLOGY OFFICER AND ASSISTANT TO THE PRESIDENT

“This collaborative theme is the theme I’ll highlight for Life After...,” says Chopra, who also served at the state level as the secretary of technology for the Commonwealth of Virginia, in an interview for this white paper. “In almost every major domain, we’re going to find ourselves with a much more dramatic productivity imperative than we face today because the long-term demand curve for public services likely will exceed our long-term revenue curve, at least as it’s currently seen through the federal, state and local ecosystem.”<sup>2</sup>

While recognizing the scale and complexity of the challenges facing government in the decade ahead, Chopra is drawn to what Levitt would call “cheap and simple fixes” such as crowd sourcing workable intergovernmental technical standards with state chief information officers. He is also a fan of initiatives such as Apps for Democracy,<sup>3</sup> the contest-driven co-creation of useful mash-ups and mobile applications using government-held data feeds — an approach pioneered by his colleague, National Chief Information Officer Vivek Kundra, during his previous



tenure with the District of Columbia. This high-profile work — together with initiatives such as Recovery.gov, Transparency.gov and Data.gov — has set a tone and direction for the Administration’s approach toward transparency — online and off. If there was any doubt, Office of Management and Budget (OMB) Director Peter R. Orszag spelled it out at the end of 2009. His direction to agency heads centered around four desired outcomes:

1. publish government information online;
2. improve the quality of government information;
3. create and institutionalize a culture of open government; and
4. create an enabling policy framework for open government.

The Open Government Directive, as the memo was known, came with deadlines — and a reminder of even higher expectations. Orszag wrote, “But because of the presumption of openness that the President has endorsed, agencies are encouraged to advance their open government initiatives well ahead of those deadlines.”<sup>74</sup>

#### ***CO-CREATION, COLLABORATION AND CONSOLIDATION: THIS TIME, IT’S STRUCTURAL***

There are structural changes ahead, too. Michigan Gov. Jennifer Granholm ordered the consolidation of not only data centers and servers — although that has been done in the state — but entire agencies. At her direction, work began last fall on combining the Department of Information Technology and the Department of Management and Budget. When complete, the consolidated department will bring the total agency count to 15, down from the constitutional cap of 20 agencies, the level the state was at just a few years ago. Significantly, the current state CIO, Ken Theis, will oversee the consolidation of the two departments and will be the director of the new department.

Urban thinker Richard Florida coined the term “reset” to describe a fundamentally different kind of recovery that follows seismic shifts in the economy.<sup>5</sup> The National Governors Association (NGA) Center for Best Practices is focusing much of its research efforts on helping states make sense of what the reset means in resizing and reshaping state governments, believing that it will be the defining work of governors on both sides of the 2010 election cycle.

#### ***INTRODUCTION: IS IT TIME TO PUT “DOING MORE WITH LESS” OUT OF ITS MISERY?***

After years of repeating the mantra of doing more with less, the cold, hard-nosed reality is that these times may require doing less with less. Even if current workloads can be maintained in a doing-the-same-with-less scenario, there is a gut-level recognition that the public’s work will be done differently if it is to be done at all.

All but three U.S. states report widening budget gaps for the current fiscal year. The gaps are expected to widen next year because of the destruction of the tax base — property, income and sales taxes — in the wake of the global fiscal crisis.<sup>6</sup> Of course, those are the three primary revenue sources on which state and local governments rely. It has left scars on the landscape that not even the \$280 billion in federal stabilization funds through the American Recovery and Reinvestment Act (ARRA)<sup>7</sup> can mask, never mind heal. It also begs the question about what happens when the stabilization funds for state and local governments under the federal stimulus package are spent down in 2012.

Data from this period indicated that: (a) unlike the period following the recession early this decade, this recovery has been jobless to date; and, (b) public sector job losses are accelerating as public agencies reduced staff to cope with budget cuts in ways that furloughs and other less permanent measures had been unable to do.

The former prompted extensions to unemployment benefits and forced the responsible agencies in California and elsewhere to re-tool their services around a new category of client — the long-term unemployed worker. The latter may be just a preview of public sector job losses that will become necessary to balance budgets in subsequent years as state and local government learn to operate within their significantly reduced means. Both suggest that as demand for public services continues to rise (as a result of sustained unemployment, shifts in how health care is delivered and the bow wave effects of baby boomers reaching retirement age among other causes), the human capacity of government is diminished by economic displacement, retirement and the prospect of better compensation outside of public service.

**GETTING ALIGNED WITH THE NEW BUCKETS OF MONEY**

Public sector chief information officers (CIO) have long championed the technology-based overhauls that promised to make government more efficient and effective. However, the results of an annual straw poll of state CIOs by their national organization<sup>8</sup> demonstrates that the things about which CIOs care — consolidation, virtualization, shared services and broadband networks among others — are means to a greater end. They always have been. But there are few things as effective as a fiscal crisis to focus the mind.

It is perhaps not surprising, but noteworthy just the same, that three-quarters of the Top 10 state CIO priorities — budget and cost control, broadband and connectivity, ARRA, cyber-security, transparency, infrastructure and health information — have direct ties to the federal stimulus package. These linkages will likely persist until the money is gone. Significantly, one priority of stimulus funding did not make the CIOs’ priorities. In fact, green IT and sustainability fell out of the Top 10 this year after debuting in the seventh spot last year. A reasonable explanation for the shift is that the aspirational energy savings that were nested in the green category are now being operationalized through pursuit of the cost control priority.

The list represents an interesting hybrid that reflects the priorities of the Obama Administration in terms of what it is willing to fund and those of public CIOs, often with the support of — or at the urging of — public officials intent on changing the way government does business. If the majority

of the stimulus and its follow-on activity is about need, and it is, it is also worth noting that one is all about expectation — transparency. It too is a defining characteristic of “Life After...”.

**THE NEW TRANSPARENCY:  
SEEING INSIDE, SEEING TO THE EDGES**

NASCIO President and Utah State CIO Steve Fletcher says that straw polls of public officials are increasingly mirroring what they are learning about the people they serve. “Citizens have expressed what their priorities are, this is what we feel about things,” says Fletcher of the give and take with the public during the first waves of budget adjustments. “When we provide services, we can say [to the public] ‘you didn’t seem to care about those but you really got upset when we cut these.’” The technologies of transparency are telegraphing public expectations while stripping away the insulation that once protected government from public reaction, says Fletcher. “Citizens will have more say in what services get delivered and how they get delivered.”<sup>9</sup>

Transparency is not new. The modern open government, open records and open meetings movement is generally dated from 1967 and the passage of Florida’s Government-in-the-Sunshine Law,<sup>10</sup> which was a catalyst for many other voter-led initiatives in other states.

At the federal level, Congress first enacted the Freedom of Information Act (FOIA) in 1966, requiring executive branch agencies to disclose records upon receiving a written request

2010	2009	2008	2007	2006	NASCIO Priorities
1	3	--	--	--	Budget and Cost Control
2	1	1	2	--	Consolidation
3	2	6	3	--	Shared Services
4	--	7	(4)		Broadband and Connectivity
5	--	--	--	--	ARRA — The Stimulus
6	4	2	1	1	Information/Cyber-security
7	8	--	--	--	Transparency
8	--	--	--	6	Infrastructure
9	9	5	6	8	Health Information
10	10	8	22	5	Governance

for them, except for those records that are protected from disclosure by exemptions or exclusions of the FOIA. The 1974 Privacy Act established controls over how executive agencies gather, manage and disclose personal information. FOIA was revised in 1996 to account for public access to digital records under the Electronic Freedom of Information Act Amendments (E-FOIA).<sup>11</sup>

It is against that backdrop that two illustrative stories of transparency played themselves out in late 2009. The first was a FOIA response by the CIA to the National Security Archive, an independent non-governmental research institute and library located at The George Washington University. It took 20 years. The request was submitted in July 1989. The response came in June 2009.<sup>12</sup>

Compare that with the near real-time data reporting that came with the \$787 billion ARRA through the designated tracking Web site, Recovery.gov, which was hurriedly rebuilt and bulked up in advance of the first state quarterly reporting deadline.<sup>13</sup> The site was ramped up to accept, roll up and display data from 131,000 filers.<sup>14</sup>

On the eve of the deadline, Minnesota State CIO and outgoing NASCIO President Gopal Khanna cautioned that the difficulties lay with the systems used by the filers. “They were not architected 10 years ago to have that capability. It does put an enormous amount of pressure on all governments. It could result in some erroneous reporting and inadequate collection of data but we have to allow this process to sift out over the next couple of years.”<sup>15</sup>

Indeed, there were problems: 15,000 filers were delinquent.<sup>16</sup> Despite 10 days of scrubbing, data errors inadvertently created non-existent Congressional districts and other anomalies. It made great fodder for Administration critics and the chattering classes in the media. More significantly, it raised the ire of Rep. David Obey, D-Wis., chairman of the House Committee on Appropriations and one of the chief architects of the stimulus package.

The inaccuracies are outrageous, and the Administration owes itself, the Congress, and every American a commitment to work night and day to correct the ludicrous mistakes. We designed the Recovery Act to be open and transparent. Whether the numbers are good news or bad news, I want honest numbers and I want them now.<sup>17</sup>

Federal Chief Technology Officer Aneesh Chopra was both pragmatic and philosophical in his response. On the matter of accidentally creating extra Congressional districts, Chopra asks, “why can’t we auto populate Congressional districts using simple address tools that are already available? There are some questions that ... allow us to iterate on the circumstances.”

The bumps along the way will be forgotten if government can get the larger project right. “The long-term direction that we are on in terms of transparency is not stoppable,” concludes Chopra, “We are on the path to dramatically increase the nature of the government’s transparency to its citizenry and, no matter what blips along the way the data might expose, the trouble, the challenges, we will find our way around it.”<sup>18</sup>

Digital disclosure, warts and all, is an improvement over what has become an old, tired and dysfunctional paper-based regime of open records. But it is bigger than disclosure. Modern transparency signals what may be the last best chance for a leaner, more (inter)dependent government to respond to and engage its public on the public’s terms. As a practical matter, government cannot afford to do anything less. Compared to old school, unsustainable alternatives, transparency as a way of doing the public’s business may be remembered as a cheap and simple fix.

## ***LIFE AFTER ... WHY IT MATTERS***

The state CIOs’ Top 10 priorities list is a useful snapshot of what’s happening now, and how those perceptions have changed year to year. The purpose here is to cast an eye forward in anticipation of the interdependent relationships among citizen needs and expectations, the resizing and streamlining of government into an affordable and sustainable set of public services, and a technological dynamic that can draw us into community over issues of common concern.

There is no single silver bullet among the 10 characteristics discussed on the following page but, together, they hold the potential to change the way governments do the public’s business in ways that ensure that this difficult journey ends with a government that we can afford and that performs well. None of what follows should be attempted solo — they involve technologies and ideas that, at root, foster cross agency, jurisdictional and sector collaboration and are better when used together.

To those ends, Life After is ...



**Simple and Engaging**, focusing on functionality and ease of use in direct service delivery and optimization of the citizens' experience with their government;



**Social and Responsible**, extending transparency to be more than a new set of reporting requirements by instilling greater public accountability and ultimately a new way of doing the public's business;



**Smart**, as in better decisions through better information, and applying smart technologies to key infrastructures such as electricity, pipelines and transportation en route to sustainable future structures;



**Sustainable**, both ecologically through energy conservation and smarter ways to work and economically in terms of making and keeping public services affordable now and in the long term;



**Streamlined**, through the new face of integration that reconciles new functions and features in the doing of the public's business in a networked collaborative world of new universes of providers, users and devices;



**Shared**, collaboratively or co-created services, adding the impulse behind contests such as Apps for Democracy, NYC Big Apps or the multi-city Code for America<sup>19</sup> to the well-established and growing practice of retooling the elements of service delivery as a shared service environment in and among jurisdictions across the country;



**Simultaneously Local and Global**, becoming hyper local in online service delivery while, at the same time, making universal, one-stop services for attracting businesses and tourists;



**Seamlessly Connected — Always On**, where broadband penetration is a matter of regional and national competitiveness while mobile majority among the people in government services put more and more demand on the network;



**Secure**, where perimeter security is necessary, but not sufficient in a world in which critical infrastructure, new platforms (smart grid, cloud computing and Web 2.0), applications (light, legacy



and new enterprise) and devices (desktop and mobile) all represent target-rich environments; and, **Skilled**, in which governments will compete with industry and non-profits for energetic, innovative and imaginative next-generation leaders by preparing career pathways and then getting out of the way.

The issues of re-skilling government may ultimately be the toughest and most important issue to address because it is the summary of public service — putting people with people to solve problems. Technology can help, but it is more than a demographic or even political calculation. It is a people proposition.

“We need to make it easy for someone to come into state government or local government or even the federal government and make a contribution and then move onto the next job that they want to have,” says Maine's CIO Dick Thompson. “Young people today are not the career employee that I am at the age that I am.”

Thompson has a keen sense of what government work looks like after him. “They want to come in, make a mark, get some experience, move on to the next more interesting job. They are into making things, building things, they have the toolset. We need to trust some of these younger folks and give them the opportunity to teach us how they work because they are darned efficient.”<sup>20</sup>

Their efficiency comes from being embedded in a technology ecosystem in which a premium is placed on speed and relevance. Meeting those expectations animates the discussion that follows by collaborators on this white paper, each of whom is a senior fellow with the Center for Digital Government and each former public servants in jurisdictions as diverse as the cities of Tucson, Los Angeles and San Francisco, and the states of Washington and Texas. They bring those perspectives to the 10 characteristics of Life After ... each of which is discussed in turn. Theirs is not the final word on the subjects at hand, but reflect how they would think about things if they sat where you are sitting.

# SIMPLE AND ENGAGING



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If a tree falls in the forest an IT system isn't used by anyone, was it worth building in the first place?



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ Pretend there is no user manual, because they won't read it anyway.
- ✓ If it isn't useful, it's worthless.
- ✓ Technology is common, design is sublime.

### Things to Do

- ✓ Build a core competency in usability, user-centered design and visualization.
- ✓ Embrace the "permanent beta."
- ✓ Open the design process up to your users.

### Things Not to Do

- ✓ "End user acceptance testing" isn't dessert; it's the main course.
- ✓ Don't "baffle them with buzz words."
- ✓ Don't let users change their minds all the time — structure is still essential.



## Tools and Tricks: Increasing Your Probability of Success

Building systems to support the citizen isn't a black art, but it does require the implementation of certain new tools and techniques that have been in short supply in government IT shops. Here are a few:

- ✓ User-centered design. It's not an attitude; it's a formal discipline. Get the books, get trained and get experienced. Experts exist who can help.
- ✓ Formal usability testing. Half of our readers are rolling their eyes, and the other half don't think they can afford it. Reality: For less than the price of one failed project, you can afford to make your IT shop close to a global leader in usability testing.
- ✓ Invite the public into your tent. When in doubt, seek out the authentic voice of the citizen. Be wary here, though. The best citizen input is the type that you actively solicit on your own through outreach efforts. The citizens who come to you on their own may not be representative of the population, and might have a very specific axe to grind.





## **Why it Matters: How Will Things be Different if You Get it Right?**

You'll save money, make an impact, avoid failed projects and stop dumping complex tools onto users who don't appreciate them. Your customer service metrics will rise, as will your credibility in the organization.

## **Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right**

Collecting and analyzing quantitative data is essential to this effort. Watch these metrics:

- ✓ Surveyed citizen satisfaction
- ✓ Number of people who click beyond your home page, instead of picking up the phone
- ✓ Measured adoption rates for online services

## **Knowing it Mattered II: The Consequences of Doing Nothing**

While the costs of doing nothing are largely hidden, that doesn't mean they are small. Projects that are not ultimately used waste an enormous amount of resources. It's better to give the money back than to build a system that no one will use.

## **Essential Learning: A Short List of Resources**

- ✓ Read *The Visual Display of Quantitative Information* by Edward Tufte. It's a classic of the field, and your graphic designers, usability engineers and industrial designers will be very impressed.
- ✓ Check out *User-Centered Design* on Wikipedia: [http://en.wikipedia.org/wiki/User\\_centered\\_design](http://en.wikipedia.org/wiki/User_centered_design)
- ✓ Also look for *Usability Testing* on Wikipedia: [http://en.wikipedia.org/wiki/Usability\\_testing](http://en.wikipedia.org/wiki/Usability_testing). These are great starting places for further learning.

## ***SIMPLE AND ENGAGING'S BACK STORY***

### ***COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM***

Not long ago, IT projects were the work of an expert, few who toiled far from the gaze of the users of the systems they provided. IT success required the mastery of finicky machines that were prone to breaking down if they weren't handled just so. Practitioners needed to fill their heads with proprietary jargon and to avoid undocumented "features" with a carefulness bordering on paranoia. A Web-era programmer described this first generation of business programming this way: "Those whom the gods wish to smite are condemned to learn mainframe JCL (job control language)."

It seems that IT projects of this first era all began with the same warning to the end users: Stand back. This work is for professionals only. Oh, how times have changed. If a "programmer" is someone who gives computer encoded instructions to provide structure to its operation, we have all become programmers. Users have become much more tech savvy than their predecessors, just as the technologies have relentlessly become easier to use. Arcane jargon has been abandoned as words like "tweet," "blog," and "wiki" have entered the parlance of everyday people. The users and their tools have converged. There used to be a gulf between IT experts and the unwashed masses dialing up on their 2400 baud modems to America Online. Now, the average person carries a smart phone in their pocket that is more powerful — and infinitely easier to use — than a 1960's mainframe.

We in the IT profession are fond of using the metaphor of a pendulum swinging back and forth to describe the often cyclical trends in our industry. This is one case where there is no pendulum — just a forward march toward technology that is simpler, easier to use, and fundamentally more human.

### ***MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE***

Joe Marcella, CIO for the city of Las Vegas, credits a strong emphasis on usability as the competitive advantage that propelled him to three consecutive wins in the Center for Digital Government's Digital Cities award program. The award program is based on the Digital Cities survey,

which examines how municipalities incorporate information technology into operations that better serve citizens engaging with local government.

He brought in Greg Duncan and strongly backed Duncan's efforts to write user-centered design into the city's DNA. It wasn't easy, and the Vegas innovators faced stiff opposition. They stayed the course of simplicity, even going so far as to remove the confusing names of certain internal departments from the city's Web site in favor of language that the public could understand.

"The citizen didn't come to your site to use an 'online parking ticket management system,' they came to pay their ticket," says Duncan. It's one city, regardless of what you are coming for."

The results have been extraordinary. After a recent round of user-centered redesign, use of the city's "How Do I" service jumped 290 percent.<sup>21</sup>

On the other side of the country, the state of Delaware has long had a reputation for being the place to do business with its solid track record of adjudicating business law, efficient corporate services and low franchise taxes. One area that had defied modernization is the outdated, paper-heavy process by which the nation's 4.3 million registered notaries certify nearly a billion documents per year. Convinced there was a simpler, easier and more engaging alternative, the state of Delaware developed an innovative online service that allows for secure electronic notarization of documents. Not only is this greener, but it has also become more secure. Best of all, it's easier to use and has enhanced Delaware's reputation as a business-friendly state.

No discussion about simplicity and engagement could be complete without a hat tip to the diligent work that e-government portal directors have been delivering for more than a decade. Utah's radically redesigned portal is easier to use than most commercial sites, propelling them to the top of the Center's Best of the Web awards, a contest which has recognized excellence of official Web portals of United States cities, counties and states for the past 15 years.

The state of West Virginia, city of Houston, city of Camden, N.J., and state of Texas have all introduced major service improvements aimed squarely at citizen usability. Not only have these improvements received myriad awards, they have also had a dramatic improvement on citizen satisfaction.

# SMART



**tweet**

Be SMART with Silo busting, data Mining, Analysis and Reporting Technologies.



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ Analytics can support more than CRM; be innovative.
- ✓ Data supports making decisions; it doesn't make them.
- ✓ Business units know the data and processes; IT knows the architecture; management sets the policies; and vendors have the tools.

### Things to Do

- ✓ Be realistic about the condition of data.
- ✓ Build on data already residing in disparate systems.
- ✓ Provide easy access to combined data — use reporting tools that can be configured.

### Things Not to Do

- ✓ Expect IT staff to be experts or do all the data mining.
- ✓ Expect anyone to effectively use the tools without proper training.
- ✓ Go fishing instead of targeting data mining efforts.

## Tools and Tricks: Increasing Your Probability of Success

- ✓ XML and other data-sharing tools
- ✓ Analytical products and services from myriad vendors
- ✓ Enterprise systems
- ✓ Mining data from existing systems
- ✓ Customizing or configuring dashboards to individual user groups
- ✓ Collecting data from a variety of sources — enterprise and departmental systems, publicly available data
- ✓ Adopting a data-centric architecture
- ✓ Moving away from paper files with document or content management





## Why it Matters: How Will Things be Different if You Get it Right?

By getting it right, you can increase the speed of decision-making — backed up by data — and improve the ability to predict and impact incomes. Services are increasingly personalized.

## Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right

- ✓ **In** — one view of the customer **Out** — number of feeds/data sources
- ✓ **In** — pulling data from wherever it exists **Out** — putting data all together in one place
- ✓ **In** — data quality and accessibility **Out** — how much is automated

## Knowing it Mattered II: The Consequences of Doing Nothing

- ✓ Too much data requiring too much time to review it all
- ✓ Never-ending data warehousing projects
- ✓ Subjective or anecdotal decision-making
- ✓ One-size-fits-all services

## SMART'S BACK STORY

### **COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM**

Since its inception, technology has offered the promise of working smarter — performing tasks faster and with more accuracy. As such, the old conventional wisdom of automating processes, implementing new systems and integrating technological intelligence has consumed enormous amounts of time and resources. The results are everywhere, including intelligent transportation systems, connected citizens, and online services.

The new conventional wisdom, driven by the economic downturn as much as technological exhaustion, is all about the data. The concept of data mining is not new, but the implementation is evolving. As organizations have fewer resources to invest in new systems, the attention is turning to maximizing existing investments in technology and avoiding complex implementations or system upgrades. Only the largest organizations have the resources to build enormous data warehouses; the rest are using existing tools or not-so-painful add-ons to mine existing data where it typically resides — within siloed systems. This helps organizations be more efficient and enables targeted responses, proactive actions, revenue enhancement, fraud prevention, greater transparency and increased data-driven decision-making.

### **MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE**

Through planning, process re-engineering and developing a business case and implementation strategy, government agencies are finding ways to increase revenue, improve tax collection, enhance customer service and use best practices to transform their agencies. The state of Hawaii Department of Taxation increased compliance with business taxes, and in less than two years collected \$62.4 million in additional tax revenue that would otherwise not have been paid. Other states have achieved similar results by following this plan to work smarter — Virginia and California collected \$231 million and \$824 million in additional tax revenues, respectively.

The state of Wyoming Secretary of State is using technology to work smarter and meet federal requirements.



Wyoming's centralized online voter registration system (WYOREG) compares voter registration information with court information, death certificates and department of motor vehicle records for validation. The system automatically does the comparisons between systems and, using advanced analytical tools, identifies potential issues. These possible exceptions are reported to employees who use their knowledge and experience to resolve the issues. The campaign finance information system (WYCFIS) allows candidates, political action committees and political parties to register and file required information online. It also provides online access to citizens, who can build personalized reports based on their own criteria and uses advanced analytical tools to ensure that statutory limitations are followed. When issues are identified by the system, it flags them and notifies the user and Secretary of State staff.

Advanced technologies can also help internal staff work smarter to support an organization. The North Carolina Office of Information Technology Services automated the monitoring of key systems and networks that serve 26 agencies, the general assembly and several local governments. This built on their existing investments and added capabilities such as proactive alerts, root cause analysis and capacity planning to reduce user frustrations and improve operations. Similarly, the IT team at Hartsfield-Jackson Atlanta Airport — one of the busiest airports in the world — uses advanced technologies to monitor, manage and prevent outages for its wide array of technology equipment. In addition to proactive alerts, root cause analysis, and detailed reporting capabilities, the new tools allow staff to model the relationships between equipment to identify the impact that problems on one device have on others.

# SUSTAINABLE



**tweet**

Sustainability requires a holistic approach that includes ecological, fiscal, operational and workforce efforts.



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ Be aware of the organization's costs, priorities and culture.
- ✓ Learn best practices on moving employees and infrastructure into the virtual world.
- ✓ Sustainability requires ongoing efforts and commitment.

### Things to Do

- ✓ Be open to changes, including altering management styles.
- ✓ Collaborate with IT, management, vendors and external partners.
- ✓ Let go of traditional hands-on approaches, own and operate processes.

### Things Not to Do

- ✓ Working off-site is NOT a right, so you don't need to treat it as one.
- ✓ Small changes often produce small results. Don't always expect a big paycheck.
- ✓ Don't forget people are an important aspect of sustainability.

## Tools and Tricks: Increasing Your Probability of Success

- ✓ Technology
  - Remote office tools (smart phones, wireless connections, laptops, VPN, etc.)
  - Enterprise systems
  - Cloud computing
- ✓ Best Practices
  - Knowledge management
  - Budget for ongoing costs upfront
  - Public and private partnerships





## Why it Matters: How Will Things be Different if You Get it Right?

- ✓ Increase ability to attract talent and retain knowledge as employees leave
- ✓ Reduce expenses and ensure funding is available when needed
- ✓ Eliminate place-based dependencies

## Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right

- ✓ **In** — hard dollar ROI    **Out** — payback or service-improvement-only business cases
- ✓ **In** — productivity    **Out** — punching a clock
- ✓ **In** — permanent reduction in real estate needs    **Out** — duplicating office space at home

## Knowing it Mattered II: The Consequences of Doing Nothing

- ✓ Cost over-runs
- ✓ Talent shortage
- ✓ Falling off the funding cliff

## Essential Learning: A Short List of Resources

- ✓ Succession planning  
<http://www.contingencyplanning.com/articles/73206/>
- ✓ Arizona telework information  
<http://www.teleworkarizona.com/>
- ✓ Virginia telework program  
<http://www.teleworkva.org/>

## SUSTAINABLE'S BACK STORY

### COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM

Since green became king, sustainability efforts have centered on ecological initiatives, but the discussion has expanded to include fiscal matters. Under the old conventional wisdom, ecological sustainability included limited teleworking initiatives, greening the data center and power management. Conventional economic sustainability focused on capital improvement planning, relying on general funds, driving costs out of IT and shortening the payback period for IT investments.

The new conventional wisdom includes ecological and economic efforts. These initiatives include:

- evolving occasional teleworking into full-scale programs;
- employing cloud computing to lower total cost of ownership;
- sharing services and moving beyond simple payback to hard dollar ROI;
- expanding self-service and providing up-front planning for ongoing operating costs; and
- ensuring government has the workforce to meet service demands and retaining valuable knowledge as employees retire.

### MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE

The city of Anaheim's emergency operations center is no longer Earth bound. Using a single application delivered over a wireless public safety network, EVOC — the Enterprise Virtual Operations Center — provides first responders and government officials with instant access to maps, GPS, traffic information, weather conditions, blueprints, video feeds and other information critical to responding to and managing emergencies. The response is not delayed by the requirement to physically report to a central location.<sup>22</sup>



*"IF WE CAN BECOME MORE EFFICIENT, WE CAN ASK FOR MORE MONEY BECAUSE NOW WE CAN JUSTIFY THAT WE ARE SPENDING THE MONEY EFFECTIVELY DURING THE GRANT YEAR."*

*- CARLO GOVIA, FIRST DEPUTY COMMISSIONER AND CHIEF FINANCIAL OFFICER, CHICAGO DEPARTMENT OF PUBLIC HEALTH*

The Chicago Department of Public Health (CDPH) funds two-thirds of its annual budget through grants, which requires it to maintain or increase the level of grant funding each year. Previously, the department had to request carry-forward for approximately 10 percent of the annual grant funding, resulting in the potential for less funding in the following year. CDPH is now managing the full grant lifecycle. By adding rules to its existing system, CDPH can easily track stimulus funds and meet ARRA's specific reporting requirements. The agency is providing better public value and making more prudent use of funds. "If we can become more efficient, we can ask for more money because now we can justify that we are spending the money effectively during the grant year," said Carlo Govia, first deputy commissioner and chief financial officer for the department.<sup>23</sup>

Through deployment of enterprise systems and a shared services approach, the city of Houston and the Florida Department of Revenue realized hard dollar return on investments in technology. Houston reduced its technical resource requirements, reallocating nearly 20 positions out of its mainframe operations<sup>24</sup> and Florida's Department of Revenue is realizing an \$8 return for every \$1 spent on its SUNTAX system.<sup>25</sup>





# STREAMLINED



**tweet**

Lost in the labyrinth no more — streamlining the virtual enterprise improves citizens' experience with government.



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ Streamlining the virtual enterprise means redrawing or even eliminating boundaries.
- ✓ You can't control it all.
- ✓ How you've 'always done things' is over, including how prior streamlining efforts were handled.

### Things to Do

- ✓ Cast a wide net when defining the virtual enterprise.
- ✓ Identify your pain points and attack those first.
- ✓ Address security and privacy from the beginning and throughout the initiative.

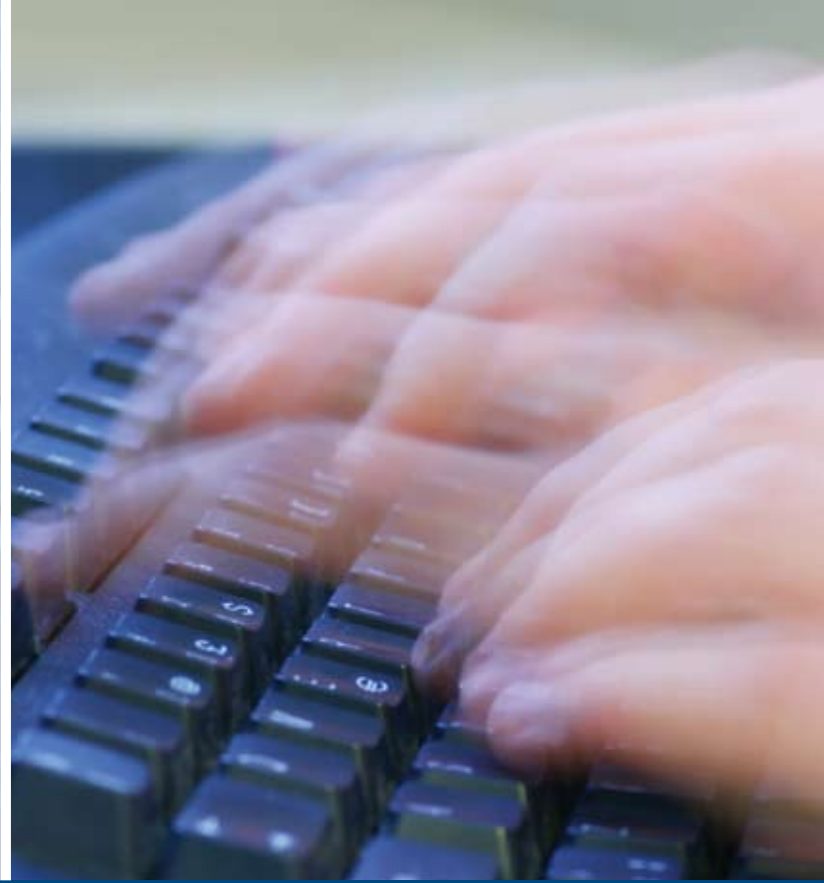
### Things Not to Do

- ✓ Throw out discipline and best practices.
- ✓ Leave out end users and rely on IT only for streamlining.
- ✓ Forget that streamlining is a transformational effort requiring cultural shifts and change management.

## Tools and Tricks: Increasing Your Probability of Success

- ✓ Solutions
  - Cloud computing resources — SaaS, utility computing, Web services
  - Service-Oriented Architecture
  - Enterprise systems
- ✓ Best Practices
  - Shared services
  - Consolidation
  - Stakeholder involvement





### **Why it Matters: How Will Things be Different if You Get it Right?**

- ✓ Complexity is reduced and processes are improved end to end
- ✓ Systems, data and stakeholders are integrated
- ✓ Compliance will increase while fraud and abuse decrease

### **Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right**

- ✓ **In** — just-in-time ordering **Out** — just-in-case inventory
- ✓ **In** — early payment discounts **Out** — Penalties for late payments
- ✓ **In** — end-to-end process improvement **Out** — optimization of functional tasks

### **Knowing it Mattered II: The Consequences of Doing Nothing**

- ✓ The need for more resources to maintain services or provide incremental improvements
- ✓ Increased complexity and integration needs
- ✓ Multiple handoffs between departments, organizations and/or levels of government

## STREAMLINED'S BACK STORY

### **COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM**

The old conventional wisdom of automating government services was to document a process in its current state, re-imagine the process in its desired state, apply some formal (or often informal) method of re-engineering and implement technology to move from 'as is' toward 'to be.' At best, this approach improves a process across multiple departments or the organization as a whole; at worst it optimizes a process within a single business unit or function, sometimes at the expense of other business units.

The new conventional wisdom extends streamlining efforts to the virtual enterprise — an approach that includes a collection of stakeholders who are involved in the process regardless of organizational boundaries — and includes seamless integration of third-party provision of software, infrastructure and Web services. Organizational boundaries and silos of service are as troublesome as old departmental boundaries. Additionally, considering a larger pool of stakeholders allows entities to re-distribute responsibilities to the party that is most effective in handling them. In this evolution, streamlining improves transparency, reduces handoffs and helps consumers of public services more easily navigate the complexities of government.

### **MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE**



With the annual operating cost of its aging financial system continuing to increase, the city of St. Paul, Minn., recognized it was time to replace it with a more efficient system. The city also wanted to dramatically reduce the amount of paper

*THE NEW CONVENTIONAL WISDOM EXTENDS STREAMLINING EFFORTS TO THE VIRTUAL ENTERPRISE – AN APPROACH THAT INCLUDES A COLLECTION OF STAKEHOLDERS WHO ARE INVOLVED IN THE PROCESS REGARDLESS OF ORGANIZATIONAL BOUNDARIES.*

handling and manual processing, enable data sharing among its 14 departments, improve data integrity, reduce the time to produce important reports such as over-time use, and take advantage of bulk purchasing.

The economic downturn actually accelerated the need to move forward, with tighter revenue streams requiring better tools to manage budgets and keep spending in check across multiple city departments. The result is an enterprise-wide software system that includes financial, asset, human resource, workforce, and supply chain management and business intelligence capabilities.<sup>26</sup> All told, the system is projected to pay for itself in a relatively short time and start saving the city roughly \$3.5 million by 2014.

Pennsylvania is using a shared-services model and supplier relationship management software to reform procurement. Following a private sector virtual enterprise model, procurement resources were consolidated into a center that includes teams of commodity-based specialists who have achieved \$40+ million in savings and a ROI of 300 percent.<sup>27</sup>



# SOCIAL AND RESPONSIBLE



tweet

Be somebody's Louis Brandeis because "Sunshine is [still] a great disinfectant."



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ The technology is comparatively cheap — but it isn't free.
- ✓ Open records and security are key challenges.
- ✓ The conversation will happen — with or without your voice.

### Things to Do

- ✓ Strategize to identify the right technologies for your organization.
- ✓ Find applications that really matter to accomplish real goals.
- ✓ Search for the appropriate data sets to make public.

### Things Not to Do

- ✓ Don't jump in without thinking — sound policy and legal advice is essential.
- ✓ Don't just check the box — make it count.
- ✓ Don't fight the public's conversation — embrace it.

## Tools and Tricks: Increasing Your Probability of Success

The road to social and responsible computing is an unfamiliar but rewarding one. Here are a few tools and tricks to get you started:

- ✓ **Social networking tools.** Look to the popular consumer sites like Facebook, MySpace, Twitter, and LinkedIn as a starting point. Establishing a presence there is step one.
- ✓ **Cloud computing.** The cloud "rolls in" again here. While cloud computing has been a running theme in several sections of this paper, it's especially relevant here. The cloud is the indispensable platform for social computing applications.
- ✓ **Open records and archiving solutions.** Unlike most Facebook users, government has a responsibility to make its archives open, long-lasting and accessible to the public. There are approaches and tools out there to help with the process, and it's worth seeking them out.





## Why it Matters: How Will Things be Different if You Get it Right?

The main barrier to action on social and responsible computing is typically the fear that it will hurt the government's reputation. Quite paradoxically, it usually has the opposite effect. Expect that a properly conceived and implemented social technology program will improve your reputation among key stakeholders.

## Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right

Just because it's social doesn't mean it isn't quantitative. Here are some metrics for social success:

- ✓ Number of people connected with you, i.e. Facebook friends, Twitter followers, etc.
- ✓ Traffic, readership or participation in your social initiatives
- ✓ Favorability rating of press coverage and community input

## Knowing it Mattered II: The Consequences of Doing Nothing

Inaction in this area is really not an option. If you don't start the Web 2.0 conversation about your government entity, someone else will. Avoid playing catch-up, and stake your claim early.

## Essential Learning: A Short List of Resources

- ✓ Check out the Manor Labs innovation platform at <http://www.manorlabs.org/>.
- ✓ *Government Technology's* "Year in Review" addresses the impact that Web 2.0 has had on government at all levels. See it at <http://www.govtech.com/gt/734612>.

## **SOCIAL AND RESPONSIBLE'S BACK STORY**

### **COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM**

In discussions about social media and transparency, a famous line from Tom Cruise's movie, *A Few Good Men*, comes to mind. Antagonized by our hero's repeated quest for the truth, the inward-looking villain played by Jack Nicholson yells, "The truth? You can't handle the truth!"

Without ever realizing it, many of us in government have been playing the role of Colonel Jessup for years. When the state of Texas was considering posting all of its raw financial information online, much hallway chatter said that the public wouldn't be able to make sense of all that information. Many predicted that an ill-informed citizenry would "melt the phones" with silly questions arising from the avalanche of data. Quite the opposite happened, and the state found that the public could handle the truth very well indeed.<sup>28</sup>

Social technologies are driving a genuinely new form of communication between the public and government leaders — one that is now bidirectional. Gone is the broadcast model in which a select few government experts would parcel out an excessively polished set of communications on a quarterly or yearly basis. With the advent of Web 2.0 and a multiplicity of social technologies, the one-way broadcast is giving way to a two-way conversation. Far from being a problem, this change is a boon to government and has the potential to improve public trust, transparency and healthy accountability.

### **MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE**

While a thousand government Facebook pages and Twitter accounts are blooming, we are only scratching the surface of efforts to deliver real and sustainable public value. The leading edge of public sector CIOs are finding ways to apply social technologies to their mainline government operations and are beginning to realize the benefits. One such jurisdiction is the city of Manor, Texas. Led by its trailblazing CIO, Dustin Haisler, this small town of 5,800 has garnered an outsized reputation for Web 2.0 innovation. Haisler recently launched a social technology initiative called Manor Labs, which has

caught the attention of Deputy Federal CTO Beth Noveck and Web watcher Tim O'Reilly.<sup>29</sup> Noveck recently blogged about Haisler's initiative, describing it this way:

"A participant can sign up to suggest 'ideas and solutions' for the police department, the municipal court, and everything in between. Each participant's suggestion is ranked and rewarded with 'innobucks.' These innobucks points can be redeemed for prizes: a million innobucks points wins 'mayor for the day' while 400,000 points can be traded for a ride-along with the Chief of Police."<sup>30</sup>

While the site is still new, a number of interesting ideas have already been submitted. A wide range of people are embracing the effort. If just one idea submitted comes to fruition, it's worth the effort.



According to a blog post by David Grassl, section chief for the Wisconsin Division of Enterprise Technology, technology innovation also played a key role in transparency and accountability for economic stimulus reporting. Many different departments were involved in submitting stimulus data, and a complex approval process was required. By allowing the submission of data electronically from multiple users and automating the workflow, Wisconsin was able to ensure the accuracy and timeliness of their submission. As Office of Management and Budget (OMB) rules changed, the system changed with them. In the end, technology allowed more data to be delivered faster — to support the increased demand for transparency in the ARRA.<sup>31</sup>

# SHARED



tweet

If two heads are better than one, what can a whole crowd deliver?



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ Sharing leverages the “wisdom of the crowd.”
- ✓ IT isn’t a physical object, it’s a shared service.
- ✓ Not all shared service providers are equally effective.

### Things to Do

- ✓ Become an expert at working with service level agreements (SLAs).
- ✓ Learn to let go of the physical hardware.
- ✓ Know your neighbors — other systems, that is.

### Things Not to Do

- ✓ Don’t neglect security — it is more of a challenge in a shared environment.
- ✓ Don’t assume service quality is a given.
- ✓ Don’t rush in to the wrong fit because it’s trendy.

## Tools and Tricks: Increasing Your Probability of Success

- ✓ **Cloud computing.** For the right applications, a cloud computing approach is just what the doctor ordered. Be careful to ensure that security and service levels are appropriate for the specific mission and application involved, however.
- ✓ **Virtualization.** Share the hardware, and reap the financial and operational benefits.
- ✓ **Open Source.** Leverage an international base of programmers creating commodity tools to cut licensing costs. Keep service and support in mind, though. Few government agencies have the programming staff needed to implement open source without a service agreement.
- ✓ **Crowdsourcing.** Following the lead of Apps for America, New York’s Big Apps, and the multi-city Code for America, consider making entire data sets available to the public. Encourage the public to use the data for their own mash-ups and watch the results.





## **Why it Matters: How Will Things be Different if You Get it Right?**

When you get this right, 1+1 really can equal 3. There can be real cost savings. However, the improvements to the creativity and innovativeness of solutions may just outweigh the financial benefits.

## **Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right**

If you can't measure it, it might not be worth doing. Watch these metrics:

- ✓ Cost savings metrics like servers per administrator, budget dollars and FTE counts
- ✓ Surveyed customer satisfaction (internal and external)
- ✓ Qualitative indicators of public engagement like press coverage or public testimony

## **Knowing it Mattered II: The Consequences of Doing Nothing**

If we keep to ourselves and don't adopt a shared computing approach, the gap between our efficiency and that of our peers will continue to grow. Let it grow too much and you'll put your organization at risk for much more disruptive change when a budget cut does occur.

## **Essential Learning: A Short List of Resources**

- ✓ Read *The Wisdom of Crowds* by James Surowiecki. It's a great introduction to the idea that a well-organized group can outperform any single member.
- ✓ Read the Center for Digital Government's recent white paper on cloud computing in government, called "Clouds Rolling In." Available at <http://www.govtech.com/gt/papers/3578>.



## SHARED'S BACK STORY

### *COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM*

Let's face it — a culture of “asset ownership” has reigned in the IT community for the better part of two decades. IT used to be an entirely closed, proprietary and on-premise operation. We owned the servers, we owned (or at least licensed) the software, and we maintained the systems with our own employees. System administrators worked in close proximity to their assigned hardware, and could be called back to the server room by the “beep beep” of a pager.

With the rise of the Internet, the asset ownership paradigm began to change. Suddenly we began to think of IT resources as some sort of subscription service, not as physical objects. Search engines, Web email accounts, hardware leasing, and online commerce started to change the way we thought about delivering technology. In the back office, the shared services revolution made us think about IT in a fundamentally new way.

Many people have suggested that a pendulum has simply swung back to the earlier days of mainframe timesharing. That comparison is tenuous at best, and it risks missing the essence of today's opportunity. Remember, those once-shared mainframes were owned by one organization, ran proprietary software, were usually operated by people with physical access to the machine, and were only touched by one's own employees. While there is some conceptual similarity, that model hardly resembles today's environment. Today, application development, maintenance, design, storage, processing, and even visual layout are accomplished by a wise crowd of participants from around the globe who hail from multiple organizations.

### *MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE*

Much has been said of the Apps for America program hosted by the municipal government of Washington, D.C. While most people are aware of it by now, it remains as a hallmark example of how sharing can take on a new and much deeper meaning today. It is remarkable what can be accomplished by sharing data with the public and then challenging them to develop mash-ups of their own.



The state of Tennessee has made the jump to a shared computing approach, and has seen real benefits in terms of cost savings and operational efficiencies. Mark Bengel, CIO for Tennessee, has successfully consolidated nearly 80 percent of the state's servers. While his number of employees is down by 17 percent due to economic conditions, that hasn't stopped progress. Even with the decreased number of employees, Bengel now supports 81 percent more servers and 175 percent more databases. How has he been able to accomplish such phenomenal growth with a reduced staff? “We have been very successful at using technology to do more with less,” says Bengel. “Half of our servers are virtualized ... and another tool that has contained costs is open source.” With the move to open source, Bengel hasn't seen any drop in service quality. “Even in open source, we only use supported software.” By using virtualization to share physical hardware and by buying in to the shared open-source software community, Bengel has indeed been able to “do more with less.”<sup>32</sup>

And then there is the cloud. While most of government remains caught between the extremes of cloud proponents and opponents, the idea of a shared cloud is becoming real. The best situation for a shared infrastructure (i.e. cloud) comes about when the system is shared by multiple stakeholders. The state of Michigan, for example, has unveiled a great example of public-private collaboration that is hosted on a public cloud infrastructure. The state partnered with a private company to obtain an affordable enterprise license to 11,000 square miles of imagery at a steeply discounted price. The imagery is accessible through a published Web services application programming interface. By collaborating across jurisdictions, the state as a whole was able to achieve a remarkably low price-per-square-mile — far lower than an individual agency could have obtained on its own. With the cloud infrastructure, state-built apps and remote users can access the service anytime, and from anywhere — all without buying a single mapping server or photo on their own.

# SIMULTANEOUSLY LOCAL & GLOBAL



**tweet**

On the Internet, nobody knows you are a small town. But residents of communities of all sizes expect small town service and responsiveness. Welcome to the age of global locals.



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ The public record is alive. It is the data that is held and produced by government, and used to hold government to account by locals. It helps them decide whether to move into a community and to decide whether to open a new business.
- ✓ Distinct presentation of that data for different audiences makes sense, but it's different slices of the same data, not different data.
- ✓ New tools are making it faster, easier, and often cheaper to meet the needs of governments themselves and the expectations of residents, visitors and investors.

### Things to Do

- ✓ Develop online presence with various audiences in mind.
- ✓ Rethink the information held by government and make it available as data feeds that can be malleable and mashed.
- ✓ Collaborate. Collaborate. Collaborate. It can be a big lonely planet to take on alone; a regional approach builds on unique strengths and combined resources of neighboring communities, and makes individual communities less of an island in competing with other parts of the country — not to mention other parts of the globe.

### Things Not to Do

- ✓ Settle for brochureware as a community's online presence. A paragraph and a picture is a poor and uncompetitive substitute for targeted, useful data that can be interrogated by local residents and international visitors or investors alike.
- ✓ Assume that you can focus only on local residents to the exclusion of the watching world — or vice versa. It is a both/and proposition.
- ✓ Hope that somebody else will do it; the Chamber of Commerce might; a community group might; the city down the road might; but government will be conspicuous by its absence and the absence of the unique data it holds if it elects not to engage its own community.



## Tools and Tricks: Increasing Your Probability of Success

- ✓ Solutions
  - GeolP location based services and collaboration
  - Cross boundary mash-ups of government-held data
- ✓ Best Practices
  - Multilingual content
  - Targeted micro portals that remain tied to main portal



## Why it Matters: How Will Things be Different if You Get it Right?

- ✓ Design matters. Locals expect to be able to do real things quickly and easily; prospective visitors and investors are comparing data and experience among communities competing for their attention.
- ✓ The portal is a non-exclusive entry point to online offerings. Engage people where they congregate naturally — social networks, online communities and photo- and video-sharing sites — in order to make a first impression and invite them to explore further with targeted links.
- ✓ Transparency of economic, environmental and quality of life data (growth, crime, school performance) is key to informed decisions — to visit, to move, to invest.
- ✓ Skilled — Transparency of workforce data allows community leaders to better plan, respond and adapt; and job changers and investors to evaluate the prospects of a move.
- ✓ Operational efficiencies — Large numbers of routine inquiries can be satisfied through a self-service channel. (Apps for Democracy in Washington, D.C. is credited with reducing public disclosure requests by a third, freeing those resources to do higher value of work.)
- ✓ Livability — Locals benefit from better decisions in which a wider context is considered.
- ✓ Regionalization — America's 85,000 cities, towns, boroughs, counties and districts are consolidating into 363 regional areas. Internet-based collaboration can help.
- ✓ Economic vitality — In a world in which labor has become fixed and capital is mobile, communities must continually be on the hunt for the next opportunity while guarding against becoming overly dependent on a single sector or industry.

## Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right

- ✓ Provided there is a baseline; growth in visitors, the ratio of in- and out- migration, jobs lost vs. created, and housing and industrial starts all provide statistical indicators of community health and the effectiveness of economic development strategies.

## Knowing it Mattered II: The Consequences of Doing Nothing

- ✓ Local uncertainties among residents and businesses about whether the community will remain a good place to live, work and raise a family
- ✓ Being invisible to the outside world; out of sight, out of mind, foregoing new opportunities due to obscurity

## SIMULTANEOUSLY GLOBAL AND LOCAL'S BACK STORY

### COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM

Local residents expect transparency in how government does the public's business, and need modern tools to help ensure that information and services are available when and where they are needed. If locals want to see to the edges of the community, prospective visitors, movers and investors have similar needs to see inside what, for them, is a faraway place.

The open records and open meetings movement (begun over four decades ago through citizen initiative) has found an ally in contemporary technical tools such as extensible markup language (XML) and machine-to-machine Web 2.0 data exchanges. The state of Utah has broken down organizational lines in favor of a statewide public meeting notice and calendar. Likewise, Northglenn, Colo. developed its own public meeting records look-up service using open source software.

Transparency has become synonymous with financial tracking through the online government checkbook movement in Kansas, Maryland, Rhode Island and Colorado among others in which transaction detail and daily balances are available for public inspection. States such as Maine and Utah are emulating the federal government Data.gov feed repository to make government held data available for outside inspection and interrogation. The federal stimulus package came with heightened reporting requirements. New York City leveraged its NYCStat one-stop data program to create a comprehensive and intuitive online stimulus tracker. For its part, Arkansas extended its stimulus transparency through an iPhone application.

Economic development is part marketing and outreach, and part demonstrating competence and credibility. The same 3-1-1 CRM call centers that have improved service responsiveness from New York City to Chattanooga, Tenn., to Houston, Texas, have also created a central nervous system for public works. Also added to the mix are innovations such as a customer service data warehouse in Miami-Dade that reinforces a one-to-one relationship between citizens and

their government, and an online service request tracking application based in the county of Los Angeles that provides collaborative coverage of 88 cities in the region.

While available only for residential projects, the city of Rocklin, Calif., offers an online estimator of the permit fees for new housing starts. King County, Wash., offers an online guide to ecologically sustainable home renovations, which signals the county government's priorities in terms of the future of the community.



Washington, the self-described most trade dependent state in the union, makes portions of the content on access.wa.gov available in a half-dozen languages — Spanish, Cambodian, Chinese, Korean, Vietnamese and Russian. Major search engines including Bing and Google provide on-the-fly language conversion services. The state of Nevada uses one of these services to provide information in German, Chinese, Korean, Spanish, French, Italian, Japanese and Portuguese. What happens in Vegas may stay in Vegas, but its home state realizes that English by itself does not cast a sufficiently broad net to get visitors to come to Vegas in the first place.

*WHAT HAPPENS IN VEGAS MAY STAY IN VEGAS, BUT ITS HOME STATE REALIZES THAT ENGLISH BY ITSELF DOES NOT CAST A SUFFICIENTLY BROAD NET TO GET VISITORS TO COME TO VEGAS IN THE FIRST PLACE.*

### **MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE**

States and localities have made a common practice of creating micro portals for specific functions and targeted audiences. They range from awareness programs for alcohol and substance abuse to promotional sites for locally produced beef or lentils. They have also been widely deployed to bifurcate between the audiences of interest here — local residents, tourists and potential investors.

Omnibus and micro portals alike are being made more dynamic through the use of geolocation services, which are performed by associating a geographic location with the Internet Protocol (IP) addresses of the visitors' machines. In 2009, the state of Utah debuted GeolP at the portal level — [utah.gov](http://utah.gov) — providing a dynamic filtering of the information and services based on the location of the person (or, more properly, the person's computer.) Terabytes of data and hundreds of state and local services are automatically winnowed down to a list of the most relevant to that location. (For visitors from outside the state, GeolP defaults to Salt Lake City.)



“We’ve got some work to do there but I think, thus far, it has been very well received. People like it. They want to use it,” says Utah State CIO Steve Fletcher. “We don’t have to duplicate these activities so how do we share in the operation for the benefits of the citizens? That still needs to be worked out.”

Fletcher adds that GeolP forces a fresh look at working together, across jurisdictional lines. “There is going to need to be more collaboration with local folks. They want to

participate but we have not figured out the best method for participating or collaborating. Who is going to pay for it? How is it going to go forward? Now we are trying to figure out how to piggyback, how to get lots of other entities involved. I think it is a very positive thing.”

Geospatial technologies are also being used to advantage to track everything from snow removal needs in Boston through an integrated dashboard, road closure notification in Boone County, Mo., and locating the nearest child care facility for residents of Colorado to mapping the location of land parcels with tax liens in Richmond, Va., and an online application for self-guided historic tours in Washington, D.C.

# SEAMLESSLY CONNECTED — ALWAYS ON



**tweet**

Move beyond broadband with unified communications for always on, seamless connectivity in public service.



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ Unified communications is still relatively new in practice; standards are still evolving.
- ✓ Public sector success stories are not numerous yet.
- ✓ It's important to learn about Session Initiation Protocol (SIP) and other standards before embarking on implementation.

### Things to Do

- ✓ Obtain enterprise buy-in since unified communications is not just for IT.
- ✓ Start with VoIP and then add features and functionality a little at a time.
- ✓ Go for an integrated, scalable solution that will support your organization now and into the (unknown) future.

### Things Not to Do

- ✓ Underestimate capacity, security and other infrastructure needs.
- ✓ Assume that a phone is a phone and fail to provide adequate training.
- ✓ Believe that you have to build the network infrastructure yourself.

## Tools and Tricks: Increasing Your Probability of Success

- ✓ Tools and Standards
  - Session Initiation Protocol (SIP)
  - Media gateways
  - Call management systems
  - VoIP
- ✓ Best Practices
  - Converge the IT and telecommunication staffs before embarking on deployment
  - Select one line of business or section as the first-user group for implementation





## Why it Matters: How Will Things be Different if You Get it Right?

Unified communications solutions will:

- ✓ Allow end users to access telecommunication resources in an integrated manner
- ✓ Provide analytical capabilities that support fact-based staffing
- ✓ Be shared when built on open standards
- ✓ Reduce complexity and costs
- ✓ Support customer self service
- ✓ Create a secure, consistent mobile communication experience
- ✓ Provide a platform for pushing out applications to the preferred end-point device
- ✓ Take advantage of investments in network infrastructure

## Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right

- ✓ **In** — unified inbox **Out** — checking email, then voice mail, then the fax machine
- ✓ **In** — consistent mobile experience **Out** — switching devices based on location
- ✓ **In** — plug and play moves **Out** — expensive and time consuming moves and changes

## Knowing it Mattered II: The Consequences of Doing Nothing

- ✓ Employees not connected when they are not at their desk
- ✓ Multiple transfers, asking for the same information repeatedly
- ✓ Employees carrying multiple devices

## **SEAMLESSLY CONNECTED'S BACK STORY**

### **COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM**

Broadband penetration to the home has risen from 3 percent in 2000 to 63 percent as of April 2009.<sup>33</sup> Thanks to the proliferation of mobile devices — smart phones, digital books and netbooks — individuals are driving up Internet usage numbers. With money and attention focused on building infrastructure, the challenge now is tying it all together and making use of the network.

This rise of a mobile majority has implications for both service providers and government. Public sector agencies will continue to feel pressure from all sides. Citizens want online access to everything, from everywhere, all the time and right now. Businesses want to interact with government in a virtual manner. Employees expect their digital work environment to at least match the level of functionality and connectivity they have personally. The new conventional wisdom is about partnerships among technology and telecommunications providers to offer seamless access. Always-on is now always-on seamless connectivity.



### **MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE**

Government agencies are turning to unified communications solutions to connect remote locations and offer seamless access across their jurisdiction. In Montana, less than one-half of the nearly 12,000 state employees work in the capital

*THE NEW CONVENTIONAL WISDOM IS ABOUT PARTNERSHIPS AMONG TECHNOLOGY AND TELECOMMUNICATIONS PROVIDERS TO OFFER SEAMLESS ACCESS. ALWAYS-ON IS NOW ALWAYS-ON SEAMLESS CONNECTIVITY.*

city of Helena. With the state covering almost 150,000 square miles, communication and access can be challenging. The state is implementing unified communications that include Web-based access to email and personal productivity tools such as calendaring. They are also implementing VoIP to consolidate phone systems to use existing data lines and provide continuous access whether employees are at their desks, remote locations or in motion between them. Using this same solution, they are deploying secure instant messaging and Web conferencing. The state has already saved over \$100,000 in hardware costs, consolidated server infrastructure by 95 percent, reduced email administration resources by 50 percent and supported system growth.<sup>34</sup>

When the Bert Fish Medical Center in New Smyrna Beach, Fla., found itself with multiple phone systems that did not communicate well with each other, they knew it was time to make changes. They decided to implement unified communications beginning with a VoIP solution. The biggest improvement came from wireless handset integration. Instead of using cell phones, mobile staff uses the VoIP handsets to stay connected when on the move throughout the hospital — a feature that reduces noise and costs.



# SECURE



**tweet**

Build trust, not walls to secure your digital assets.



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ Less is more. Review or establish record retention policies based on regulatory requirements and the intended use of the data.
- ✓ Move beyond the latest and greatest gadget.
- ✓ Consolidation impacts risk management.

### Things to Do

- ✓ Focus your attention; identify and manage digital assets and likely threats against them.
- ✓ Plan for movement; data seldom remains within a single entity or system.
- ✓ Take an organization-wide approach; include digital risk management in policies and educate end users.

### Things Not to Do

- ✓ Expect IT to “handle” security for the organization.
- ✓ Implement security programs and polices once and believe the problem is fixed.
- ✓ Inhibit timely access to systems and data in the name of securing the organization’s digital assets.

## Tools and Tricks: Increasing Your Probability of Success

### ✓ Tools and Standards

- Access control, firewalls and intrusion detection
- Vulnerability scanning
- End point security<sup>35</sup>
- Encryption, authentication and biometrics
- Public Key Infrastructure (PKI)<sup>36</sup>
- Trusted Network Connect (TNC)<sup>37</sup>
- The Parkerian Hexad of confidentiality, possession/control, integrity, authenticity, availability and utility<sup>38</sup>

### ✓ Best Practices

- Identity and access management
- Security audits
- Backup and continuity of operations planning
- ISO/IEC 27002:2005 Code of practice for information security<sup>39</sup>
- Information security governance
- Records retention polices
- End user education





## Why it Matters: How Will Things be Different if You Get it Right?

- ✓ Enable secure access to anything (appropriate) from anywhere
- ✓ Build trust, confidence and credibility
- ✓ Eliminate unnecessary data and remain compliant with federal regulations
- ✓ Reduce storage requirements

## Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right

- ✓ **In** — comprehensive risk management solution **Out** — latest and greatest security gadgets
- ✓ **In** — policy-based, end point security **Out** — perimeter (only) security
- ✓ **In** — enabling access **Out** — restricting access
- ✓ **In** — policy-based purging **Out** — storing everything forever

## Knowing it Mattered II: The Consequences of Doing Nothing

- ✓ Unauthorized access
- ✓ Spam, viruses and other attacks that disrupt availability of systems
- ✓ Unintended and fraudulent use of data
- ✓ Loss of money, credibility and trust
- ✓ Higher storage costs

## Essential Learning: A Short List of Resources

- ✓ National Institute of Standards and Technology: <http://csrc.nist.gov/>
- ✓ IT Security: [www.itsecurity.com](http://www.itsecurity.com)

## SECURE'S BACK STORY

### **COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM**

Perimeter security is dead — at least on its own or as a total solution for securing public sector's digital assets. The old model of building walls to keep intruders away from digital assets is giving way to building trust to better manage data and its users. Perimeter security is necessary, but not sufficient, in a world in which critical infrastructure, new platforms (smart grid, cloud computing and Web 2.0), applications (light, legacy and new enterprise) and devices (desktop and mobile) all represent target-rich environments. Despite the enormous amount of resources spent to identify and eliminate vulnerabilities, completely securing data and systems remains an elusive goal. Government agencies now must secure digital assets and better manage identities and access to fully understand who needs access to what data, when, where, why and how. The new conventional wisdom is less about what to buy from whom and more about focusing resources on risk management by identifying and managing assets and threats. An integrated digital risk management plan is the answer for spending resources most effectively and, when combined with records elimination policies, can even reduce costs.

### **MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE**

Despite being one of the smallest counties (in land mass) in the nation, Arlington County, Va., has enormous responsibilities. Arlington is located just two miles from the White House and is home to the Pentagon, Reagan National Airport and 40 federal agencies, and provides first responder services for these critical agencies. Arlington County's police, fire and emergency services employees rely on their IT resources to get the job done. With these responsibilities, it is important for Arlington to not only have security measures in place, but also to be as efficient as possible. The county needed to reduce spam, which cost over \$750,000 a year, improve productivity, secure mobile workers and protect the organization's digital assets. Through a comprehensive, multi-layered technology solution

Arlington County realized an 80 percent reduction in email processing and payback on its investment in one year.

Farther south, the state of South Carolina Department of Probation, Parole and Pardon Services manages more than 32,000 active offenders, working to protect victims and help offenders become productive members of society. With 56 field offices and over 45 courtrooms to connect, the department was an early adopter of mobile technology. Desiring to provide a more consistent, secure mobile experience, they implemented an enterprise-wide wireless network with unified access control based on the Trusted Network Connect (TNC) standard. The solution includes identity and access management. Once fully deployed, the department will use virtual restitution centers to supervise offenders and serve victims.

The telemedicine program of the Louisiana Rural Hospital Coalition (LRHC), a statewide non-profit serving over 40 hospitals, provides online access to medical records and resources so that rural patients can be treated closer to where they live. The program connects specialists at Louisiana State University Health Sciences Center in Shreveport with rural healthcare practitioners to provide remote patient consultancies, access to training and medical research for rural medical personnel, and access to easy-to-understand medical information for patients. Originally the telemedicine program did not include online access or transmission of health records due to confidentiality and privacy concerns. Using an identity and access management solution, a secure electronic patient records system known as the Louisiana Rural Health Information Exchange was added. The security solution includes a centralized repository for all user accounts that authenticates hospital staff and a centralized, Web-based interface to manage user identities and automate the process of granting access to information based on user roles.<sup>40</sup>



# SKILLED



**tweet**

Strategic sourcing and human capital management (HCM) solutions help the public sector attract and retain the best talent.



## TRIO OF ESSENTIAL TRIOS

### Things to Know

- ✓ Integrated talent management is an important part of HCM; it includes recruiting, professional development, succession planning, performance management, compensation and skill analysis.
- ✓ Moving to strategic sourcing and HCM requires a cultural change in HR, within the business units, and among leadership.
- ✓ Evaluating, managing and developing competency based talent differs from conventional talent.

### Things to Do

- ✓ Begin competency-based programs in HR.
- ✓ Partner with universities, community colleges, trade schools, and other institutions of learning to impact educational programs and develop a pipeline of potential employees.
- ✓ Improve your image and HR processes to attract and retain the next generation workforce.

### Things Not to Do

- ✓ Assume that a HCM solution will fix bad processes, make hiring decisions or replace good managers.
- ✓ Continue to tie together legacy systems to support HR functions.
- ✓ Continue with traditional HR practices that clog the pipeline of high performing, highly skilled talent.



## Tools and Tricks: Increasing Your Probability of Success

- ✓ Tools and Standards
  - Data warehousing, XML and other data integration and sharing tools
  - Portals
  - ERP, HCM, mobile applications
  - Analytical products and services from vendors
  - Enterprise systems and Software as a Service
- ✓ Best Practices
  - Dashboards customized to individual user groups
  - Talent scorecard
  - Integration with ERP and office automation
  - Competency-based skills and education



### **Why it Matters: How Will Things be Different if You Get it Right?**

- ✓ Skills and talent aligned with organizations' priorities
- ✓ Proactive staff planning that ensures the workforce has the skills needed, when needed
- ✓ Fact based decision-making with predictive capabilities
- ✓ Standardized, streamlined HCM processes

### **Knowing it Mattered: Performance Matters That Will Help Tell You if You Get it Right**

- ✓ **In** — integrated view of employee **Out** — interfacing legacy systems
- ✓ **In** — objective decision-making based on data analysis **Out** — subjective, anecdotal-based decision-making
- ✓ **In** — one online entry point for new employees **Out** — hard copy forms with multiple entry of same information
- ✓ **In** — competency-based skills **Out** — conventional silo skills

### **Knowing it Mattered II: The Consequences of Doing Nothing**

- ✓ Multiple legacy systems and numerous interfaces
- ✓ Going to IT for reports and waiting for them to be created
- ✓ A workforce that does not have skills to meet evolving proprieties and programs
- ✓ Inconsistent hiring, compensation and performance management processes

## SKILLED'S BACK STORY

### COMPARISON: THE NEW CONVENTIONAL WISDOM VS. THE OLD CONVENTIONAL WISDOM

Organizations that succeed are those that attract and retain the best talent — employees who are well prepared and optimistic. High-performing organizations also look for employees who are energetic, innovative and imaginative — adjectives not always associated with the government workforce. To change that perception, or sometimes reality, public sector agencies need to move beyond episodic job postings and build a pipeline of talent, purposely attracting the next generation of leadership.

However, the pipeline is of little use if it flows into the very narrow funnel of traditional public sector human resource practices. While many HR departments have already automated transactions like payroll and time keeping — some have even added online employee self-service capabilities — it is time to move on to management of personnel as an asset, matching skills to needs, and managing, not just tracking, employees from hire to retire.

The new conventional wisdom is strategic sourcing and human capital management (HCM). Building relationships with institutions of higher education that are turning out competency-based talent is key. “Competencies like coalition-building, innovating, strategic thinking, problem solving and systems thinking are core for leading public

sector enterprises now and into the future. Conventional education programs that focus on stovepipe disciplines like IT, HR, and program management, aren't enough,” says George K. Beard, a senior fellow for the Center for Digital Government. Competency-based programs are emerging at universities such as Carnegie Mellon's Heinz College, the Erb Institute in Michigan, University of Minnesota Medical School, and the Rotman B-school at the University of Toronto.

HCM systems — integrated management systems that incorporate powerful analytical capabilities — are necessary for talent management, succession planning and aligning employees with the organization's changing priorities. These tools also support more objective employee performance evaluation. Automated on-boarding allows new employees to enter demographic data once instead of multiple times, select benefits and perform other new hire tasks, thereby reducing costs, increasing accuracy and giving the organization a more professional image, which appeals to the emerging workforce.

### MAKING IT REAL: HOW AND WHERE IT HAS BEEN MADE TO WORK IN REAL LIFE

The state of Michigan employs over 54,000 people in 83 counties, making it the third-largest employer in the state. With a large dispersed workforce, managing human capital had become a challenge, especially with two legacy systems, six other supporting systems, and over 150 subsystems including third-party systems. With a desire for employee self service, statewide reporting capabilities, process standardization and improvements in distributing information to all employees regardless of location, the state embarked upon a system replacement project — Human Resources Management Network (HRMN). The new system includes a single data repository, Web-based access, self service, and an intelligent knowledgebase that provides information tailored to specific employee needs and situations. The project saved \$2 million in the first year of operation and Michigan predicted the state would save \$28 million in five years.

When Montgomery County, Md., wanted to attract, develop and retain a diverse, well-qualified and high-performing





workforce, they realized they needed an integrated system with advanced analytical capabilities. They also needed to have a single, easy-to-use interface that ensured timely, relevant information was easily accessible for decision-making. To achieve this goal, the county implemented a human capital management system. Now, managers and HR officials can analyze trends and predict future personnel spending patterns and compare starting salaries for similar positions countywide to ensure compensation practices are equitable. With mobile access, the county can access information in the field to make fact-based decisions on the fly.

The state of North Carolina recently implemented human capital management in phase one of its ERP project dubbed BEACON — Building Enterprise Access for North Carolina's Core Operation Needs. Like many organizations, big or small, North Carolina had several legacy HR systems, non-standardized processes, silos of information, and duplication of effort. Implementation of HCM brought standardization, data integration, employee and manager self service, and increased operational efficiencies. A self-service portal and shared services approach provide a single point of contact for state employees. North Carolina's BEACON project made the state into a 21st-century entity that can effectively attract, manage and retain talent.

## LIFE AFTER ... THE TEN CHARACTERISTICS AT WORK

*"The future ain't what it used to be."*

*Yogi Berra<sup>41</sup>*

Importantly, the 10 characteristics presented here are not just technologies. To be sure, each has a technological element to it and many bring together more than one technology, but each is bigger than that. They bring together backend infrastructure with citizen-facing services on the front end. They are also at the nexus of a tension between competing drives to improve service delivery for its own sake and the use of performance data to inform the debate over the resizing and resetting of government itself. The former is an arena with which public CIOs have become familiar; the latter is uncharted and potentially risky territory but one in which the data may ultimately serve their highest and best purpose.

Michigan State CIO Ken Theis sees both sides of the coin clearly. "Consumers and citizens will do exactly what they are doing in the private sector," says the veteran of the auto industry. "They are going to be empowered to manage their interactions with government. It is not going to be government saying, 'this is how you interact with us.' We are going to need to give them a number of different channels so they can personalize their interaction."

### **THE RESET: RESIZING AND CONSOLIDATING GOVERNMENT, NOT JUST IT**

At the same time, Theis is part of changes within state government that would have been dismissed as impossible a few short years ago, including the elimination and consolidation of entire agencies in order to recreate a government that the state can afford. That move follows the non-trivial consolidation of 38 data centers to three in recent years, which set the stage for a new data center that is equal parts shared services ecosystem for government and an economic development initiative to bring good, clean knowledge-based jobs into the state. As an added bonus, Theis says the new state data center is designed from the outset to co-exist peaceably with cloud computing. "The cloud provides us with the agility that we're going to need

to adapt to situations in the future... . Our cloud strategy is going to allow us to stand up a secure private cloud all the way across government for primary functions and use the public cloud for those secondary functions.”

Theis says it all points to finally delivering on the long-promised transformation of government. “There are parts of government that you just won’t recognize. At the end of the day, it has got to go through a large transformation. Government was built 50, 60, 70 years ago, and was really built from an inside bureaucratic perspective. I think the world around us has changed. In the private sector, the world starts with the consumer and backs into the organization. I think government is going to go through the exact same transformation. I don’t see us getting through this and looking anything near what we look like today.”<sup>42</sup>

Minnesota State CIO Gopal Khanna echoes the trouble with aging, bureaucratic designs, “The process of government has not changed in its core over the last 50, 60, 70 years since it was first constructed coming out of the agricultural era. Moving well into the digital era, I think we need to look at the very guts of the operations of government...” Having looked deep inside government operations himself, Khanna sees a pair of inseparable tasks to be done on the way to ‘Life After.’ “What needs to be done is that we need to redefine what the future state of government needs to be and then have transition strategies to do two things. On one side, optimize the as is environment. At the same time, take us into the future state.”<sup>43</sup>

### ***FROM ENTERPRISE TO ECOSYSTEM: TOWARD A UNIFIED RECOVERY***

Federal CTO Aneesh Chopra says the only way we can achieve policy objectives and address the problem of a long-term demand curve for public services exceeding our long-term revenue curve is game-changing productivity.

“You cannot get there by cost cutting the way we thought about this in the ‘80s and ‘90s, trying to squeeze a few more dollars out of the salaries of the current work force or squeeze with whatever limited capacity we have,” says Chopra. “We have to rethink what we actually staff up to do and what category of services might we make available through collaboration where non-profit or for-profit or

individual stakeholders could come in and take the place of historically public sector capabilities. This is not something that will happen overnight.”<sup>44</sup>

Michael Locatis, who serves as the Colorado State CIO after stints with the city and county of Denver, is also on the lookout for game changers as really the only sustainable path forward. “It is going to be a long recovery for the public sector and there are going to be a few years here when we can have a great discussion about game changers in the area of shared services and partnerships.”

Locatis concedes that the state of Colorado has been struggling with consolidation. When the effort started, state government had more than 30 raised floor data centers, which Locatis and his governor are intent on bringing down to two or three in the next few years. Just as Locatis sees local government, K-12 and higher education as key to a shared services environment within the state, he also has his eyes on a potential game changer at the application level among states in their relationship to the federal government.

“I think we need to look more closely at the entire ecosystem...,” says Locatis, emphasizing this new holistic approach to the stewardship of information and technology across jurisdictional lines, “What I’m talking about here are federally mandated and funded services that are then managed at the state level and often administered at the municipal or county level. What falls into these areas are health and human services, labor, workforce, housing — those are the kinds of things I’m hoping we can work with [the federal government] on a federated model for delivering those.”

Reflecting on the pattern into which states have historically fallen, Locatis observes, “It seems that every state ends up developing its own \$200 million platform for managing essentially the same functions around social services, Medicaid, unemployment insurance benefits eligibility and management.”

“Couldn’t we figure out a better way to align the ecosystem, still give the private sector its fair share in terms of managed services and so forth but not be all running on different versions of this stuff?,” Locatis asks, “I think that’s a real game changer. I know they were starting to look at that at the federal level and I’m hoping that doesn’t get lost in



all of the other priorities there. I think if we truly want to get to 21st-century government then really streamlining the delivery of services with transparency, we need to look at the entire ecosystem — federal, state, local — and have those folks come together.”<sup>45</sup>

Rick Howard, CIO for Oregon’s Department of Human Services, says a national business architecture for health and human services is critical for effective delivery of citizen services in the coming years and, moving forward, the federal government must shift the way in which it provides money for state services. Funding policies have led to redundancies 50 times over as each state has built its own system for accomplishing the goals that all states share.

“Federal cost-allocation methodologies for state IT can be developed based on a model that permits federal agencies to pay for shared services and systems according to their benefit,” Howard says.

Broken down further, departments within states carry their own redundancies as the overlap of services is hidden by departmental siloes. Howard says states need to begin to look at services in a categorical way — this is a human being who needs your services, as well as many other services. Policies must be people-centric, not program-centric.

With a national business architecture, states can begin to procure services — not only across programs, but across other states, working through siloes to produce better outcomes.

Once the structure is in place and states catch the collaborative spirit, Howard says the possibilities are substantial. “(Leaders can start to think) how could I partner with Washington or Florida or another state to acquire services that we can share and bring in the best talent to best use the services that we are sharing?”

Across the country in Maine, State CIO Dick Thompson says folks are coming together out of necessity. “Hard times make for strange bedfellows. It causes us to look in new ways because we’re all in the same predicament. We all are suffering from a lack of revenue and the need to decrease our expenses.” Thompson, who spent much of his career in public finance, has done the math on going it alone versus finding new models of collaboration and sharing, “We also realize that if we are to continue to enhance technology,

which is necessary to improve citizen services, we need to start doing things more regionally and in a more uniform way. I think the barriers have come down. It is just a matter of finding the resources to build upon those relationships.”<sup>46</sup>

### **PERFORM AND DELIVER OR GET WHACKED**

“There is no way we can do this unless we come together and share,” says Stephen Fletcher, Utah State CIO and NASCIO President, “It is driving everybody to the middle as opposed to the fringes. Everybody is looking for ways to save money and they can’t do it by themselves because then they are going to get programs that are going to get whacked.”

Finding resources means more than waiting for a new appropriation. It means introspection, sometimes whacking outlying programs and even cannibalization, in the service of higher priorities. As Federal CTO Chopra puts it, “We need a much more clarifying view of our cost structure than we have today. Benchmarking the cost to deliver services will be an increasing priority as well as ensuring that you have an understanding inside an administration of, ‘what are your top two or three priority objectives?’ [That way, proponents of] items 5, 6, 7, 9, and 12 can start to look like areas that might be better suited to collaboration as opposed to a direct service delivery environment.”

Looking forward, Utah’s Fletcher is convinced that results matter and government is going to have to mean it this time. “One of the things that changed forever is the fact that a lot of folks didn’t understand how they were performing. So, in order to make changes, they had to get information so they could make good decisions.” Fletcher says decision-makers wanted to know, based on data, what would happen under proposed changes or alternate scenarios. The good news is that the combination of clean data, business intelligence and modern analytics hold the potential to deliver.<sup>47</sup>

Dick Thompson sees much the same thing happening in Maine. “We need to define what performance is, we need to decide what it is that we want to accomplish, and that’s really the job of my colleagues at the cabinet table. They need to no longer decide that they need to own something but how do I develop a benchmark and a performance metric that I can assign to someone, not just the IT organization

to accomplish, and that would require the same kind of discipline in the legislative process.” Conceptually, there may not be that much new here but Thompson says financial crisis has added urgency, “They need to understand how to measure outcomes going forward and then ask, ‘how do we fund to achieve those outcomes?’”

*MANAGING EXPECTATIONS AT A TIME OF DIMINISHED EXPECTATIONS IS AN IMPORTANT AND TRICKY BALANCE. THERE IS NO BENEFIT TO APPEARING POLLYANNAISH AND OUT OF TOUCH WITH CURRENT HARDSHIPS. AT THE SAME TIME, IT IS IMPORTANT TO AVOID THE PITFALLS OF PRESENTISM — THAT IS, THE TENDENCY TO PROJECT CURRENT CONDITIONS INTO THE FUTURE SO AS TO ASSUME THAT THE WAY THINGS ARE TODAY WILL BE HOW THINGS WILL BE FOR A LONG TIME.*

In Colorado, Mike Locatis says Gov. Ritter and his administration have been focused on the necessities and “delivering, delivering, delivering” public value. The fiscal crisis accelerated the type of systemic changes the state was already pursuing, says Locatis, “We came to stop the bureaucratic inertia, break down the silos and push more of an enterprise capability with data, infrastructure, [and] service delivery. All the economic situation did was punctuate the need for those very visionary transformation plans.”

The magnitude of change necessary to manage through a prolonged financial crisis is at least in the neighborhood of transformational, even if you might be inclined to shy away from lofty language in difficult times. In fact, Phil Bertolini, long-serving CIO in Oakland County, Mich., argues that it is time to talk about how to realistically “do less with less” in a way that is understood and accepted.

Managing expectations at a time of diminished expectations is an important and tricky balance. There is no benefit to appearing Pollyannaish and out of touch

with current hardships. At the same time, it is important to avoid the pitfalls of presentism — that is, the tendency to project current conditions into the future so as to assume that the way things are today will be how things will be for a long time. Presentism was folly during boom times, causing people and organizations to plan as if double digit growth was the norm and would never end. Similarly, coming to terms with systemic problems that make the current conditions that much harder to address ought not be confused with an assumption that things will always be the way they are right now.

“You hear the term being bantered about that this is the new normal. I don’t think we know enough to know if that’s true…”

I think it has opened up a lot of eyes about what we had and what we didn’t have,” observes Patrick Moore, state CIO in Georgia, “We have learned how hard it is for government to deliver services when revenues turn down. Government is an interesting animal. When revenues go down, demand for services goes up. We struggle with how to provide a consistent service to a constituent during these times.”

## ***CONCLUSION: LIFE AFTER ... THERE IS ONE, BUT IT WILL BE BUILT FROM THE GROUND UP***

*“We have no money, so we must think.”*  
– Lord Rutherford

Moore, who oversaw the outsourcing of computing and telecommunications services in Georgia in 2008, says the fiscal crisis may have had the effect of making many governments worse at what they were already bad at — investing. At issue is not talent, imagination or hard work but money — specifically, the money to capitalize reforms of all kinds, including modernizing vital infrastructures such as information technology.

“We have a better chance at being successful in managing technology than in actually doing it ourselves. The reason is that you can learn how to manage technology. You can learn the business of an agency. And this is what we are supposed to do. And providers are supposed to support that

business.” But argues Moore, “To do all the things to run the technology operation, you have to be able to invest; you have to be able to maintain skill sets; you have to be able to manage across an enterprise. All of those components take more than knowledge and an understanding of the business, they take capital, they take a lot of resources that are difficult to find and procure inside a government environment.”<sup>48</sup>

Absent investment capital, governments are left with key disciplines that properly honed and applied provide a common sense approach to Life After ... It is the stuff of transparency, accountability and performance — clean and secure data that informs decisions and monitors operational performance, all supported by shared services across agency and jurisdictional lines. There is general agreement among public CIOs that these are the right things to do and fiscal conditions are forcing executive and operational attention on them. But will the focus on these disciplines stick? “It may, it may not. It depends on how structured you’ve become,” says Utah’s Stephen Fletcher, “If you’ve integrated it into your thinking and your analysis, it will stick because it’s a great method for going forward.”



Georgia’s Patrick Moore is less sanguine, “As a whole, I don’t know how much of it sticks. I’m hopeful that I’m wrong. I don’t want to be right about that.” Moore worries that when and if there is relief to the present financial pain, a certain form of organizational amnesia will set in, “This will be an area where memories are short. The lessons

learned from what we’re going through now are not going to live on.”

“I have seen enough of government to know how it works. It is not the most conducive place to try to implement new processes. You have to have a lot of commitment from the top and I think there are lots of competing priorities at the top,” says Moore in reminding us that IT and reform are both better pursued as part of larger priorities rather than competing with them. “I think that is something that we’re simply going to struggle with — that is, airtime and ensuring that lessons learned from this downturn stick inside government.”

Sticking may be more important now than at any time in recent history. The recession has been declared over, but the length and extent of the recovery remains in doubt. Moreover, state and local governments are likely to lag the wider economy as they contend with what appear to be permanent hits to their respective tax bases. At the same time, federal stimulus funds have not been spent but they have been largely allocated — suggesting that their aid in stabilizing local treasuries will inevitably end.

The stimulus, combined with a federal government that has assumed a more activist and regulatory approach to doing the public’s business and that has promised unprecedented transparency has raised the expectations among elected officials, media, academics and citizens for a kind of visibility into the process and capturing data about results that we have never seen before. Ironically, that demand for — and heightened expectations of — transparency data may be the one thing that government critics and advocates have in common, even if they refuse to agree on anything else.

Ultimately, that irony may hold the greatest promise and peril for Life After ... If everything advocated in this paper works as intended, there will be improvements in citizen or consumer services. But perhaps as importantly, the once back-office function of data processing has emerged as the keeper of the keys to the future by providing factual, easily understandable, sensible, useable timely information to all sides of public policy debates, and letting the political implications of those data work themselves out come what may. That is not a trivial consideration, given that two-thirds of states will hold gubernatorial elections in 2010.

Imagine a world in which returning incumbents and newly elected governors alike would be able to use good data and reliable techniques to see to the edges of the enterprises they have been elected to run. It is closer than we might think, provided there is the political will to deliver on what we know how to do.

The hard learned lesson in all of this is that government cannot do things the way it always has and, at the same time, innovation — still the mother of invention — is taking root in even the hardest hit public agencies with encouraging results. The challenge is to make this renewal permanent — or institutionalize it — so as to redeem some of the pain, suffering, and hard decisions that public officials and managers have to make during the economic crisis.

Despite the difficulties and distractions, or maybe precisely because of them, state and local governments are and should be the laboratories of innovation. Since they cannot print money and run deficits like the federal government, they are going to need to continue finding new and innovative ways to meet the service, transparency and policy expectations of those they serve.

## ENDNOTES

1. See the January 21, 2009, White House Memorandum for the Heads of Executive Departments and Agencies on Transparency and Open Government at [http://www.whitehouse.gov/the\\_press\\_office/TransparencyandOpenGovernment](http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment).
2. Interview with Aneesh P. Chopra, assistant to the president and chief technology officer, associate director for technology policy, Executive Office of the President, Office of Science and Technology Policy, Washington, D.C. November 30, 2009.
3. See Apps for Democracy at [www.appsfordemocracy.org](http://www.appsfordemocracy.org).
4. Peter R. Orszag, Director, Open Government Directive: Memorandum for the Heads of Executive Departments and Agencies, United States Executive Office of Management and Budget (OMB), M10-06, December 8, 2009. (See <http://www.whitehouse.gov/open/documents/open-government-directive>).
5. Richard Florida, "How the Crash will Reshape America: The Next Economic Landscape," *The Atlantic*, March 2009. See [www.theatlantic.com/doc/200903/meltdown-geography](http://www.theatlantic.com/doc/200903/meltdown-geography).
6. The Center on Budget and Policy Priorities reported in late 2009 that: 47 out of 50 states faced or are facing shortfalls in their budgets for this and/or next year; Many of these states have already cut spending, used reserves, or raised revenues to balance their budgets. Mid-year deficits are being reported due to unexpected decreases in tax revenue generation in the first quarter (July-Sept) of FY09; and, budgets will continue to be affected even after the economy climbs out of recession.
7. The GAO originally estimated the state and local share of ARRA at \$300 billion but revised its estimate downward to \$280 billion in December 2009. See the report at [www.gao.gov/new.items/d10231.pdf](http://www.gao.gov/new.items/d10231.pdf)
8. The National Association of State Chief Information Officers (NASCIO) is a membership organization staffed out of Lexington, Ky.
9. Interview with Stephen Fletcher, Chief Information Officer (CIO), State of Utah, October 27, 2009.
10. Florida's tradition of open government dates back over as century to the passage of the Public Records Act in 1909. The current sunshine law is codified as Chapter 286 of Florida statutes. (See [http://www.leg.state.fl.us/statutes/index.cfm?App\\_mode=Display\\_Statute&URL=Ch0286/tit0286.htm&StatuteYear=2008&Title=%252D%253E2008%252D%253EChapter%20286](http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=Ch0286/tit0286.htm&StatuteYear=2008&Title=%252D%253E2008%252D%253EChapter%20286).)
11. The primary federal repository of FOIA-related information is the Justice Department's FOIA website ([www.usdoj.gov/foia](http://www.usdoj.gov/foia)).
12. Yvette M. Chin, "CIA Finally Answers a 20-Year-Old FOIA Request: The FOIA Coordinator's View," November 2, 2009 (See <http://nsarchive.wordpress.com/2009/11/02/cia-finally-answers-a-20-year-old-foia-request-the-foia-coordinators-view>) and Malcolm Byrne, "CIA Finally Answers a 20-Year-Old FOIA Request: The Analyst's View," November 2, 2009 (See <http://nsarchive.wordpress.com/2009/11/02/cia-finally-answers-a-20-year-old-foia-request-the-analysts-view>)
13. The contract by the General Services Administration for the site allocated \$9.5 million for the rebuild by January 2010, with options for work through 2014 that could raise the value to \$18 million. (See [http://www.nextgov.com/nextgov/ng\\_20090713\\_3970.php](http://www.nextgov.com/nextgov/ng_20090713_3970.php))
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15. Interview with Gopal Khanna, chief information officer (CIO), State of Minnesota, October 27, 2009.
16. LaFleur and Grabell, *Op Cite*.
17. James McConnell, "Recovery.gov numbers embarrass Obama's bureaucrats," Chicago Economic Policy Examiner, November 19, 2009. (See [www.examiner.com/x-19285-Chicago-Economic-Policy-Examiner-y2009m11d19-Recoverygov-numbers-embarrass-Obamas-bureaucrats](http://www.examiner.com/x-19285-Chicago-Economic-Policy-Examiner-y2009m11d19-Recoverygov-numbers-embarrass-Obamas-bureaucrats))
18. Chopra interview, *Op Cite*.
19. See Code for America at <http://codeforamerica.org>
20. Interview with Richard Thompson, Maine Chief Information Officer (CIO), October 26, 2009.
21. Interview with Joe Marcella, CIO, and Gregory Duncan, E-Government Officer, City of Las Vegas, November 10, 2009.
22. See a summary and description of the Enterprise Virtual Operations Center in Anaheim, Calif., at <http://www.anaheim.net/DHSLessonsLearnedEVOCCGoodStory.pdf>.
23. Interview conducted for "A Platform for the New Transparency: Meeting the Challenge of ARRA Grants Management in State and Local Government." Available for download at: [http://www.govtech.com/gt/papers/3986#anchor\\_eloqua\\_iframe](http://www.govtech.com/gt/papers/3986#anchor_eloqua_iframe)
24. See The Computer World Honors Program at: <http://www.cwhonors.org/viewCaseStudy.asp?NominationID=32>.
25. See "Integrated Tax System Designed to Improve Service" at: <http://dor.myflorida.com/dor/taxes/suntax.html>.
26. "COMET program to overhaul St. Paul's aging tech operations," Finance and Commerce Daily Newspaper, July 7, 2009 (See <http://www.accessmylibrary.com/article-1G1-203199591/comet-program-overhaul-st.html>).
27. PA Earns National Technology Award for Efficient, Shared Services (See [http://www.portal.state.pa.us/portal/server.pt?open=512&objID=401&PageID=200099&mode=2&contentid=http://pubcontent.state.pa.us/publishedcontent/publish/cop\\_general\\_government\\_operations/oa/oa\\_portal/oa\\_home/home\\_page/news\\_-\\_media/articles/pa\\_earns\\_national\\_technology\\_award\\_for\\_efficient\\_shared\\_services.html](http://www.portal.state.pa.us/portal/server.pt?open=512&objID=401&PageID=200099&mode=2&contentid=http://pubcontent.state.pa.us/publishedcontent/publish/cop_general_government_operations/oa/oa_portal/oa_home/home_page/news_-_media/articles/pa_earns_national_technology_award_for_efficient_shared_services.html))
28. See "Performance Matters," a whitepaper by the Center for Digital Government, available at <http://www.govtech.com/gt/papers/601>.
29. Tim O'Reilly interview with Beth Noveck at Web 2.0 Expo NY 2009 (See <http://manorlabs.spigit.com/Blog/View?blogid=490&blogentryid=259>)
30. Beth Noveck, Office of Science and Technology Blog, November 21, 2009 (See <http://blog.ostp.gov/2009/11/21/open-government-laboratories-of-democracy/>)
31. By David Grassl, Section Chief, Division of Enterprise Technology, Department of Administration, State of Wisconsin, Bright Side of Government Blog Post, September 14, 2009, (See [http://blogs.msdn.com/bright\\_side\\_of\\_government/archive/2009/09/14/wisconsin-s-1512-reporting-sharepoint-portal.aspx](http://blogs.msdn.com/bright_side_of_government/archive/2009/09/14/wisconsin-s-1512-reporting-sharepoint-portal.aspx))
32. Interview with Mark Bengel, CIO for the State of Tennessee, December 4, 2009.
33. <http://pewresearch.org/pubs/1254/home-broadband-adoption-2009>
34. "Montana Tests Unified Communications to Boost Responsiveness to Citizens, Cut Costs." See <http://whitepapers.techrepublic.com.com/abstract.aspx?docid=1152519>.
35. End point security is an information security concept that assumes that each device (end point) is responsible for its own security. (See more at [http://en.wikipedia.org/wiki/End\\_point\\_security](http://en.wikipedia.org/wiki/End_point_security).)
36. A Public Key Infrastructure enables users of a basically insecure public network such as the Internet to securely and privately exchange data and money through the use of a public and a private cryptographic key pair that is obtained and shared through a trusted authority. (See more at [http://searchsecurity.techtarget.com/sDefinition/0,,sid14\\_gci214299,00.html#](http://searchsecurity.techtarget.com/sDefinition/0,,sid14_gci214299,00.html#).)
37. Trusted Network Connect provides hardware-based tools to allow network managers to ensure that PCs comply with security policies. See more at (<http://www.informationweek.com/news/hardware/desktop/showArticle.jhtml?articleID=180201733>.)
38. The Parkerian Hexad includes six attributes of information that are protected by information security measures. These attributes are: confidentiality, possession, integrity, authenticity, availability and utility.
39. ISO/IEC 27002 provides best practice recommendations on information security management for use by those who are responsible for initiating, implementing or maintaining Information Security Management Systems (ISMS).
40. See Louisiana Rural Health Information Exchange at <http://www.larhix.org/Home/tabid/36/Default.aspx>.
41. When You Come to a Fork in the Road, Take It!: Inspiration and Wisdom from One of Baseball's Greatest Heroes, Hyperion, 2002, p. 159.
42. Interview with Kenneth Theis, Chief Information Officer (CIO), State of Michigan, October 26, 2009.
43. Interview with Gopal Khanna, Chief Information Officer (CIO), State of Minnesota, October 27, 2009.
44. Interview with Aneesh P. Chopra, Assistant to the President and Chief Technology Officer, Associate Director for Technology Policy, Executive Office of the President, Office of Science and Technology Policy, Washington, DC. November 30, 2009.
45. Interview with Mike Locatis, Chief Information Officer (CIO), State of Colorado, November 10, 2009.
46. Interview with Richard Thompson, Chief Information Officer (CIO), State of Maine, October 26, 2009.
47. Interview with Stephen Fletcher, Chief Information Officer (CIO), State of Utah, October 27, 2009.
48. Interview with Patrick Moore, Chief Information Officer (CIO), State of Georgia, October 27, 2009.



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**Acknowledgements:**



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